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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,713	01/30/2006	Wolfgang Rzaeki	32860-000867/US	9155
30596 7590 12/14/2007 HARNES, DICKEY & PIERCE, P.L.C. P.O.BOX 8910 RESTON, VA 20195			EXAMINER AVILA, STEPHEN P	
			ART UNIT 3617	PAPER NUMBER
			MAIL DATE 12/14/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/527,713

Applicant(s)

RZADKI ET AL.

Examiner

Stephen Avila

Art Unit

3617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 31-34 and 39-43 is/are allowed.
- 6) ☒ Claim(s) 1-30 and 35-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 7-15, 21-26, and 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schliehthorst in view of WO 02/057132 and Dombrovski et al (newly cited). Schliehthorst discloses a corvette (column 4, line 22) vessel type equipment system comprising a vessel hull 15 in the form of a corvette vessel type equipment system (column 4, line 22) on a size and requirement specific basis, standard equipment segments 13 formed from standard units and components arranged in accordance with the requirements in the vessel hull of the corvette vessel type equipment system and installable in vessel hulls of different vessel type equipment systems (column 4, lines 20-26). Not disclosed by Schliehthorst is a frigate, windings of high temperature superconductor and a propulsion segment with a combination of POD propulsion segment in the form of a completely electrical lightweight POD propulsion system and having a power of 6-8MW and includes two waterjet propulsion segments in the form of twin waterjet propulsion systems and having a power of 12-16 MW. WO 02/057132 teaches a frigate ship and a propulsion segment including a combination of POD propulsion segments 3 in the form of a completely electrical lightweight POD propulsion system and including two waterjet propulsion segments 5 in the form of twin

waterjet propulsion systems. Because of the POD propulsion segments 3 of WO 132 and the two waterjet propulsion segments 5 of WO 02/057132, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to at the time the invention was made to provide to the corvette ship of Schliehthorst with a propulsion segment including a combination of POD propulsion segments in the form of a completely electrical lightweight POD propulsion system and having a power of 6-8 MW and including two waterjet propulsion segments in the form of twin waterjet propulsion systems and having a power of 12-16 MW because it would improve safety and cut down on emissions.

Schliehthorst does not disclose a thruster segment. WO 02/057132 teaches a thruster segment 9. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide to the corvette ship of Schliehthorst a thruster segment as taught by WO 02/057132 because it would provide improved steering. It would further have been obvious to make the bow jet thruster a 0.3MW bow jet thruster to provide proper power.

The combination of Schliehthorst and WO 02/057132 does not disclose that the distance between the center of the POD propulsion segment and a nose of a traction propeller of the POD propulsion segment and the nozzle outlet openings of the pods of the waterjet propulsion segments is at least 14M or 15M; but note that it would have been obvious at the time the invention was made to a person having ordinary skill in the

art to form the distance as so that interference of the POD propellers by the waterjets is prevented.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to form the corvette vessel of Schliehthorst as claimed in claim 8 and to have the structure with strength sufficient to absorb the axial forces which occur as a result of the operation of the POD propulsion segment in view of what is shown in figure 2 of WO 02/057132 since to do so is to provide proper support for the POD propulsion segments.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to form the corvette vessel of Schliehthorst to have a power generator segment formed from a combination of at least one of two fuel cell segments each having a power of approximately 4.5MW or 6MW and generator segments each having a power of approximately 16 MW in view of WO 02/057132 using fuel cells units for the electrical steering propellers which are distributed in a decentralized manner in the vessel because it would use the environmentally friendly fuel cells and to make sure that there is proper power produced by the generators and fuel cells.

It also would have been obvious at the time the invention was made to a person having ordinary skill in the art to use the fuel cells taught by WO 02/057132 to provide Schliehthorst with two fuel cell segments which include two air breathing PEM fuel cells

associated with them in order to supply them with hydrogen with either one diesel reformer with a power of approximately 9MW or two diesel reformers each having a power of approximately 4.5 MW and to have a power generator segment be distributed over a number of ship protection areas SSB-2, SSB-3 and SSB-4 in the vessel equipment system because it is better for the environment and to use a diesel reformers which provide sufficient power and to spread the power generators along the ship would protect them from damage.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to form the POD propulsion system provided to Schliehthorst in view of WO 02/057132 to be designed to travel at a continuous cruise speed of about 12-14 knots and be supplied with electrical power in this operating state by way of two fuel cell segments, to travel at a top speed of approximately 30 knots and to be provided with electrical power by way of two gas –turbine powered generators, to supply the waterjet propulsion segments with electrical power from at least one of the fuel cell segments until the power limit of the at least one fuel cell is reached in order to start up these waterjet propulsion segments with low emissions, to have the system achieve speeds of more than 35 knots by operating a POD propulsion system and waterjet propulsion segments simultaneously in which case the distribution of the electrical power which is produced by way of the power generator segment can be achieved with optimized efficiency by way of the power distribution segment and energy management for an automation carrier system vessel, and to have a power distribution segment be a

propulsion network which is fed from fuel cells and by which a POD propulsion segment is supplied with electrical power and has a generator fed propulsion network which supply electrical power to the waterjets. Note that WO 02/057132 uses fuel cells to supply electricity to the electrical motors of the POD's and that electrical power for the electrical motors of the water jets is obtained from gas turbine generator sets.

A person of ordinary skill in the art would want to do so to reach proper speeds for the vessel and to provide electrical power to the electrical motors in a clean manner.

Further it would have been obvious to form the vessel of Schliehthorst as a frigate as taught by WO 02/057132 for improved speed.

Dombrovski et al teach an electric motor with windings of high temperature superconductor (note the Abstract, for example). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the device of Schliehthorst with motors and generators with windings of high temperature superconductor as taught by Dombrovski et al for improved efficiency.

3. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schliehthorst and WO 02/057132 as applied to claim 2 above, and further in view of Kiekhaefer.

The combination of Schliehthorst and WO 02/057132 does not disclose the waterjet propulsion segments as being equipped with a coaxial exhaust gas nozzle segment.

Note that Kiekhaefer discloses a coaxial exhaust gas nozzle segment. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to form the waterjet propulsion segments of the Schliehthorst and WO 02/057132 combination with coaxial exhaust gas nozzle segments as taught by Kiekhaefer because the exhaust would be dispersed better.

4. Claims 16-20 and 27-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. Claims 31-34 and 39-43 are allowed.

5. Applicant's arguments with respect to the rejected claims have been considered but are moot in view of the new ground(s) of rejection.

6. Note the attached translation of WO 02/057132.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Avila whose telephone number is 571-272-6678. The examiner can normally be reached on Monday to Thursday from 7 AM to 3 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samuel J. Morano can be reached on 571-272-6684. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Stephen Avila
Primary Examiner
Art Unit 3617

Avila
12/13/07